

WE CLAIM

1. A device for providing downloaded objects to an application, the device including:

5 an object layer interface for downloading from a received transport stream a module containing an object requested by an application;

a module memory for storing downloaded modules; and

a controller for monitoring whether the modules in the module memory are current versions; wherein

10 when the application requests an object contained in a stored module and the stored module is a current version, the object layer interface provides the application with the object from the module memory and, when the application requests an object contained in a stored module and the stored module is not a current version, the object layer interface downloads the current version of the module and overwrites

15 the module stored in the module memory; the device further including:

an object cache for storing objects; wherein

20 when the application requests an object contained in a stored module and the stored module is not the current version, before the object layer interface overwrites the stored module with the current version of the stored module, the controller copies into the object cache only the objects of the stored module still in use by the application.

2. A device according to claim 1 wherein the controller is responsive to information in the transport stream regarding the current versions of the modules transmitted in the transport stream.

25 3. A device according to claim 1 wherein the controller monitors whether modules are the current version according to the specifications for MHP platforms.

4. A device according to claim 1 wherein the objects are DSM-CC objects and the modules are DSM-CC modules.

30 5. A device according to claim 4 wherein the objects are copied from the module memory to the object cache by copying the corresponding BIOP messages.

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6. A device according to claim 1 further including at least one filter for filtering from the transport stream packets of a module to be downloaded.

7. A device according to claim 1 wherein the device is a television device.

5 8. A device according to claim 1 wherein the device is MHP compliant.

9. A method of providing downloaded objects to an application, the method including:

downloading from a received transport stream a module containing an object requested by an application;

10 storing the downloaded module;

monitoring whether the stored module is the current version;

when the application requests an object of a stored module and the stored module is a current version, providing the application with the object from the stored module; and

15 when the application requests an object of a stored module and the stored module is not a current version, copying only the objects of the stored module still in use by the application, downloading the current version of the stored module and overwriting the stored module with the downloaded current version of the stored module.

20 10. A computer readable storage medium having recorded thereon code components that, when loaded on a computer and executed, will cause that computer to operate according to any one of the preceding claims.

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